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GOVERNMENT CENTER
PARCEL 8 COMPETITION
DESIGN PROPOSAL

Developer

CABOT, CABOT & FORBES BOSTON DEVELOPMENT CO.

Architects

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DESIGN PROPOSAL



MASTER PLAN SUMMARY

- Objectives
- Plaza
- Office Tower
- Visual Effect

ACCESS AND CIRCULATION

- Pedestrians
- Subway Access
- Freedom Trail
- Vehicular Access
- Service Access

OFFICE TOWER

- General
- Lower Floors
- Typical Floors
- Upper Floors
- Roof
- Elevators

SPECIAL CONSIDERATIONS

- Landscaping
- Art Program
- Lighting
- Materials

PLATES (Reproduced for Brochure from Design Presentation Plates)

- Plate 1 Site Plan, Showing Neighboring Relationships
- Plate 2 Site Notes, Showing Freedom Trail, Subway Access,
Service Access and Basement Floor Plan
- Plate 3 Floor Plans - Lower Floors
- Plate 4 Floor Plans - Typical Floors
- Plate 5 Floor Plans - Upper Floors
- Plate 6 South - Elevation and Townscape
- Plate 7 East - Elevation and Townscape
- Plate 8 West - Elevation and Section
- Plate 9 North - Elevation and Section
- Plate 10 Details

APPENDIX - OUTLINE SPECIFICATIONS

MASTER PLAN SUMMARY

- Objectives** Designed to achieve aesthetic beauty and functional convenience, the master plan presented aims to satisfy two major objectives:
- To link effectively Parcel 8's diverse neighbors: the new Government Center, historic Old State House and Faneuil Hall, the financial district, and the downtown retail area.
- To serve well the interests of present and future building tenants, the flow of pedestrian and vehicular traffic through and around the site, and the spirit of the New Boston.
- Plaza** Colonial brick identical to that used throughout the Government Center covers the site, forming a continuous plaza which sweeps from the new City Hall around the Office Tower to the sidewalks of Congress and State Streets. Works of art, landscaping and special lighting effects (see later sections for details), are planned to please the eye and are placed strategically to control pedestrian circulation.
- Office Tower** The warm textured pink granite Tower soars 500 feet above Washington Mall, taking advantage of the gentle slope of the site to accommodate forty stories plus basement and sub-basement. The stepped line of its profile will present a dignified and distinctive landmark to the Boston skyline.
- Placed entirely on Parcel 8A, the Tower may be completely constructed without disturbing the present New England Merchants National Bank building. Exterior dimensions are 173' x 97' in a rectangle with the long axis running in the same direction as Congress Street. The main entrance is through a columned arcade which runs the length of the building along Washington Mall.
- Windows of glare-resistant tinted glass are recessed to provide textured interest. Special fenestration on lower floors and in the great stepped top of the Tower form a sculptured contrast to the regularity of Floors 4 through 37.

Visual Effect Visually, the proposed warm textured pink granite building on a colonial brick plaza will:

Continue the tone of City Hall Plaza

Complement, yet at the same time delineate and subtly emphasize, the light concrete Government Center buildings against their identical colonial brick plaza

Provide a compatible and harmonious link between the Old State House and Faneuil Hall, both constructed of colonial brick

Blend well with the warm granite of the Ames Building and with the weathered materials of other structures along State Street.

ACCESS AND CIRCULATION

- Pedestrians** As a gateway and pivotal point, the site must accommodate heavy pedestrian traffic. Designed for the convenience of those on foot are the broad and aesthetically pleasing mall and plaza areas and the 200 foot long Tower colonnade, which serves not only as the building entrance but also as a pedestrian thoroughfare sheltering two-thirds of the distance between State Street and City Hall. Radiant heating will keep main pedestrian paths clear in winter.
- Although the site slopes gently, all areas are accessible to the handicapped. Elevators just inside the building entrance connect with all upper floors, the bank level and the cafeteria.
- Subway Access** A subway entrance under the cover of the Tower arcade leads via a tunnel just below the surface of the ground to the focal point of the existing M.B.T.A. underground system in the Old State House (see Plate 2). The exact location of the tunnel was determined after a thorough study of subway traffic patterns. Connection was made at a point which will cut required walking distances as much as possible for commuters travelling in either direction on the two rapid transit lines.
- Freedom Trail** The route of the Freedom Trail (see Plate 2) will cross to the Plaza directly from the Old State House and will travel down to the tree shaded corner of State and Congress, an excellent vantage point for viewing the Boston Massacre site and for photographing the Old State House. It is proposed that the route then move through the Tower arcade or down Washington Mall toward the new City Hall, across the pedestrian bridge over Congress Street and on to Faneuil Hall.
- Vehicular Access** Placed at the State Street end of the Washington Mall, the automobile turn-off will naturally and conveniently serve not only the Tower, but also the Ames Building and City Hall (see Plates 1 and 2). It is large enough to accommodate a three-cab taxi stand and/or sightseeing busses in addition to transitory traffic.
- Service Access** Service vehicles reach the site through the underground tunnel off Congress Street (see Plate 2). Ramps lead to loading docks on two levels: (1) up to two truck berths servicing the bank, which are completely separate and may be locked off, if desired, and (2) down to four truck berths for general building use, such as deliveries and trash removal.

General The Tower has been designed to provide an aesthetic as well as functional and convenient facility for office users. Within the confines of the building, there is a total gross area of 669,947 sq.ft. and rentable area of 543,935 sq.ft. as measured by the New York Standard Method of Floor Measurement for Office Buildings.

Lower Floors Sub-basement and Basement
Gross Area: 16,781 sq.ft. Rentable Area: 6,281 sq.ft.

These utility levels contain mechanical space and tenant storage space.

Floor 1 - Cafeteria
Gross Area: 16,781 sq.ft. Rentable Area: 13,931 sq.ft.

The cafeteria level (see Plate 3) is reached by a large hydraulic elevator in the South Lobby and by the three low rise elevators in the North Lobby. Windows along Congress Street look out to trees and landscaped ground. The cafeteria will be divided into two sections: (1) dining space for the bank, which subsidizes employee lunches, and (2) dining space for the public. Also located on the cafeteria level is the large central kitchen.

Floor 2 - Banking Floor
Gross Area: 16,781 sq.ft. Rentable Area: 13,231 sq.ft.

The main banking entrance is at the State and Congress corner, one-half level below the arcade. Designed in consultation with the bank tenant, the main banking room is two floors high along Congress Street, with panoramic windows along that side (see Plate 3). The entire banking space can be locked and isolated from the rest of the building.

Floor 3 - Arcade Level
Gross Area: 7,612 sq.ft. All area devoted to public use

Main building entrances lead from the arcade to the North and South Lobbies. Joining the two lobbies is a gallery with a wall of glass looking over the high banking room and through the large bank windows to Congress Street (see Plate 3).

Three elevators in the North Lobby connect the bank service area, the bank cafeteria and the upper floors leased by the bank. A hydraulic elevator to the cafeteria is located in the South Lobby. Twelve additional elevators, servicing Floors 13 through 40, are in two main banks off the gallery and may be reached through either the North or South Lobby.

Floors 4 and 5

Gross Area: 11,937 sq.ft. Rentable Area: 4,327 sq.ft.

These floors are partially mechanical floors (see building sections, Plates 8 and 9), with remaining space devoted to files or business machines.

Typical Floors

	<u>Gross Area</u>	<u>Rentable Area</u>
Floors 6 through 12	16,781 sq.ft.	14,621 sq.ft.
Floors 13 and 14	16,781	14,301
Floors 15 through 26	16,781	14,881
Floors 27 and 28	16,781	14,571
Floors 29 through 35	16,781	15,451

For flexibility in interior planning, the central service core has been placed slightly off-center to provide wider bays on the Congress Street side (see Plate 4). This design also takes into account the ability to accommodate future use of sophisticated office business machines. Deeper beams between floors in the wider bays allow additional space for the heavier air conditioning and electrical requirements occasioned by this equipment. The possibility of early building obsolescence is thereby effectively hedged.

Ceilings are flat throughout, with no furring around the elevator core. Vertically pivoted windows are located in 4'9" modules. Steel frame construction makes special tenant alterations simple and reduces size of all columns.

Upper Floors

Floors 36 and 37

Gross Area: 16,781 sq.ft. Rentable Area: 9,181 sq.ft.

These floors are partially mechanical floors (see Plates 5, 8 and 9), with the majority of the area devoted to upper level office space.

Floor 38 - Luncheon Club and Restaurant

Gross Area: 13,931 sq.ft. Rentable Area: 12,581 sq.ft.

The restaurant floor includes space for an executive luncheon club, for private dining rooms, and for a public restaurant with roof garden overlooking Boston Harbor (see Plate 5). In addition to its spectacular view, the roof terrace features subtle night lighting, thirty-foot birch trees (which will be lifted into place by helicopter), ivy-covered walls, and sweet herbs planted among paving stones.

Floors 39 and 40 - Office Penthouses

Gross Area: 10,207 sq.ft. Rentable Area: 8,897 sq.ft.

The office penthouse floors have two-story executive board rooms at either end, each with its own terrace. Prestige office space occupies the balance of the area on each floor.

Roof The upper roof line is completely smooth, with no unsightly elevator penthouses or cooling tower projections, in order that the view from any vantage point, including airplanes, might not detract from the dignity of the building.

Elevators Vertical transportation includes fifteen passenger elevators, a hydraulic elevator to the cafeteria, and a large service elevator. Passenger elevators are in three banks:

Bank 1 - North Lobby Three elevators serving Floors 1 - 12
3000 lb. capacity at 500 ft. per minute

Bank 2 - South Lobby Six elevators serving Floors 13 - 26
3500 lb. capacity at 800 ft. per minute

Bank 3 - South Lobby Six elevators serving Floors 27 - 40
3500 lb. capacity at 1000 ft. per minute

SPECIAL CONSIDERATIONS

Landscaping A strong block of sycamore trees on the State Street side of the Tower provides shade, lends interest to the bank entrance and helps to contain the vehicular drop-off point. Along Congress Street, ginkgo trees are centered on each of the large bank windows and the sloping ground is covered with Boston ivy. Substantial portions of the roof garden landscaping, detailed earlier, will be visible from the street level.

Art Program It is planned that one per cent of construction costs will be devoted to art. The preliminary program calls for:

A statue under the shade trees near the corner of State and Congress Streets commemorating the Boston Massacre.

A giant sculpture in the open plaza between City Hall and the Tower.

Three forty-foot long fountain troughs at bench height along Washington Mall paralleling the Tower arcade.

Mural on south wall of South Lobby.

Mural on north wall of banking floor.

It is anticipated that final selection of artists and subject material will be made after consultation with leading museum authorities such as the Boston Museum of Fine Arts, Fogg Museum, Institute of Contemporary Art, etc.

Lighting Subject to approval by the Boston Redevelopment Authority, the plan proposes special lighting in addition to entrance and step lights:

Floodlights from a forty-foot standard on the traffic island directed to illuminate the Old State House cupola and the automobile drop-off area.

Down lights in the Tower arcade to flood the inside wall and to light pedestrian ways.

Up and down lights in the shade sycamores.

Lights in the long fountain troughs to illuminate the cascading water and under benches to light surrounding brick pavement.

Up lights under roof garden trees to illuminate the trees and to cast interesting shadows on background walls.

Lighting for sculpture and paintings, as required.

Materials

Materials have been carefully chosen for dignity, permanence and appropriateness to design objectives:

Outdoor pavement, including sidewalks along State and Congress Street: Colonial brick as specified for City Hall Plaza.

Arcade pavement: Warm textured pink granite.

Building "skin," including all beveled surfaces and column casings: Warm textured pink granite, 2" thick, with thermal finish.

Glass: Glare-resistant Parallel-O-Glass.

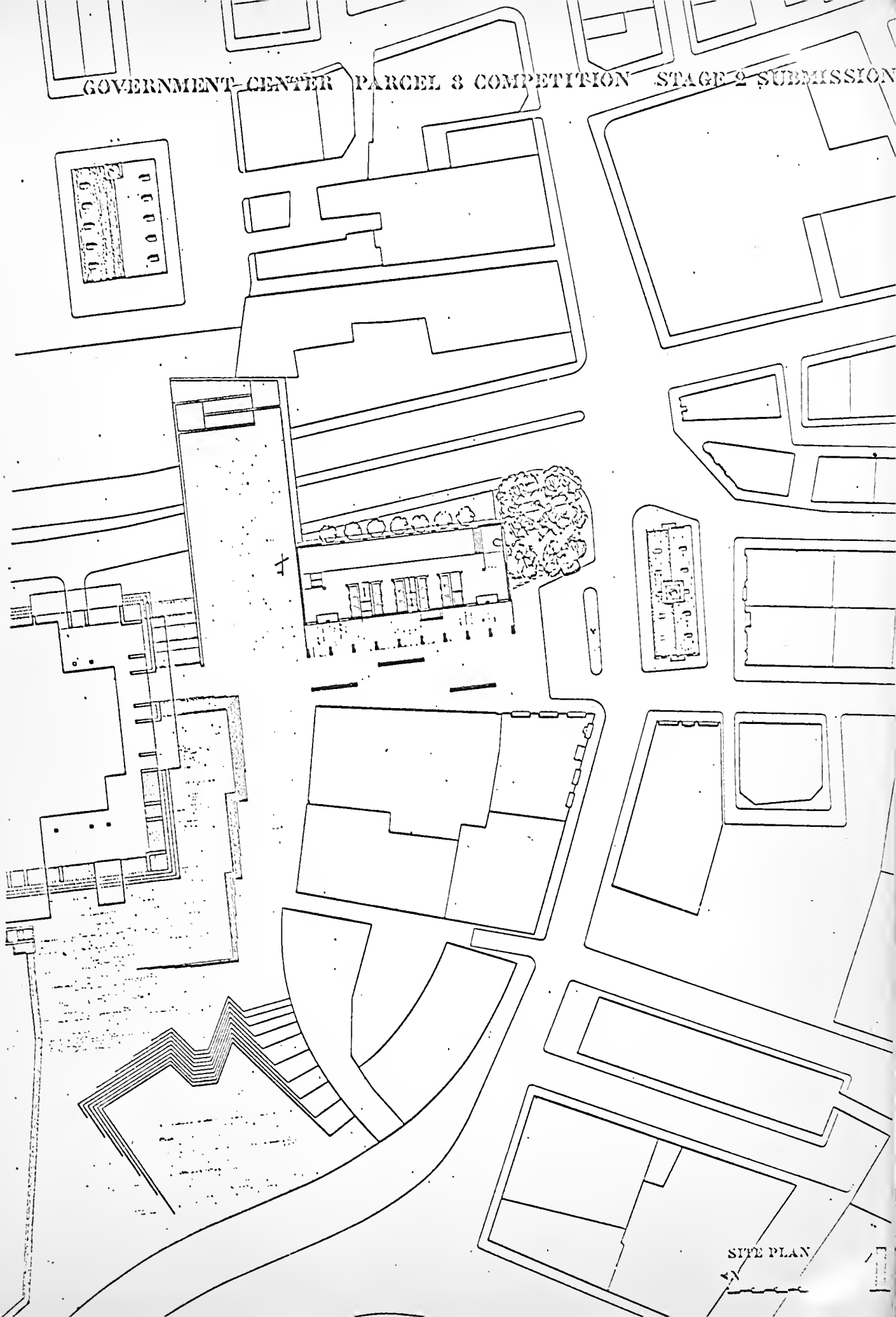
Metal door and window frames: Anodized dark bronze aluminum sections.

Lobby walls and floors: Pink granite, polished.

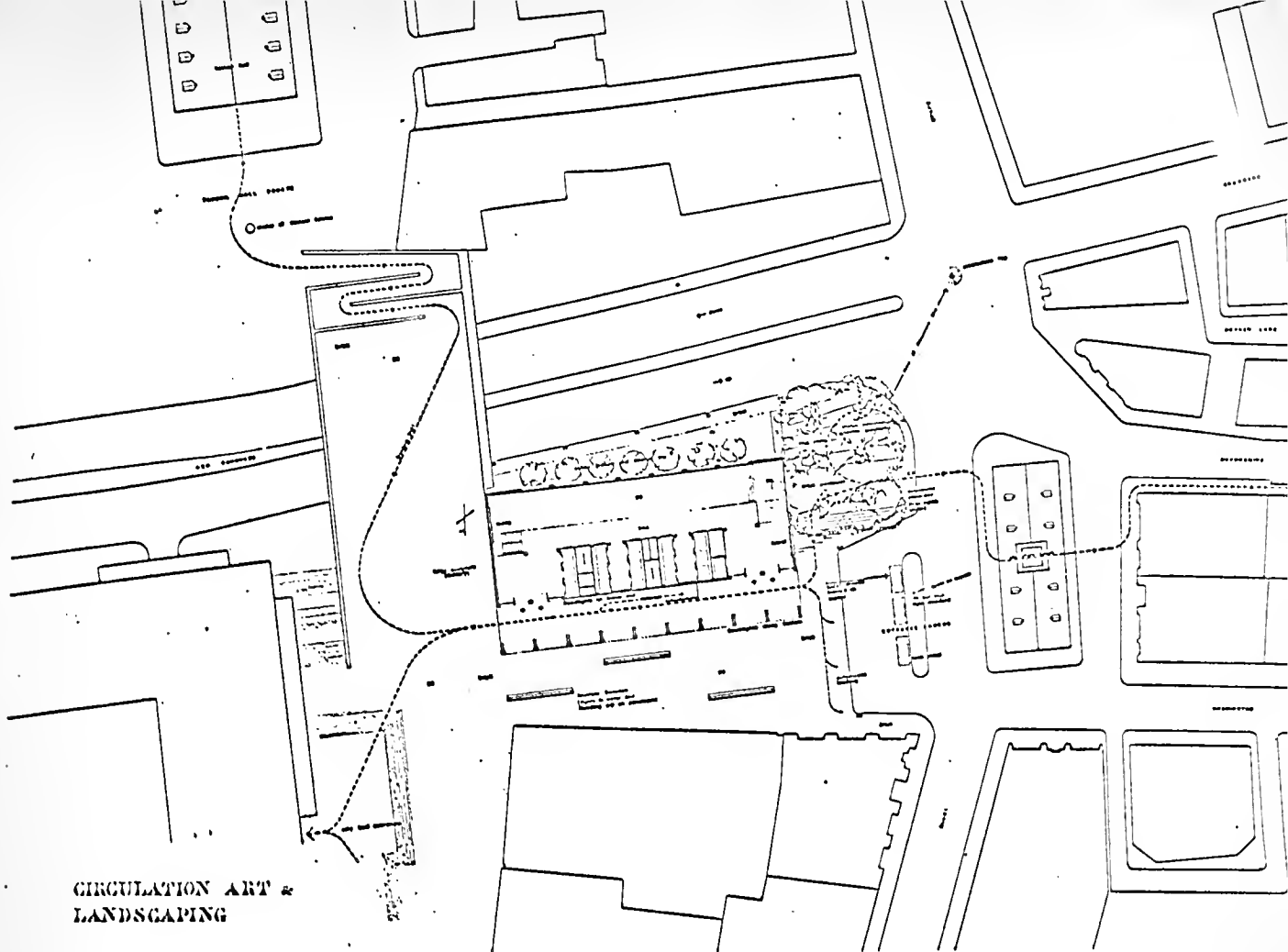
Fountain troughs: Warm textured pink granite, thermal finish.

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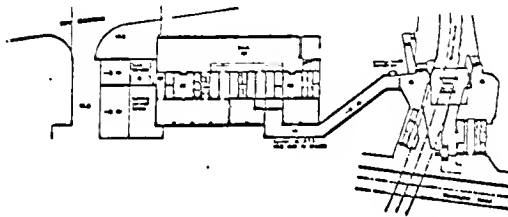
GOVERNMENT CENTER PARCEL 8 COMPETITION STAGE 2 SUBMISSION



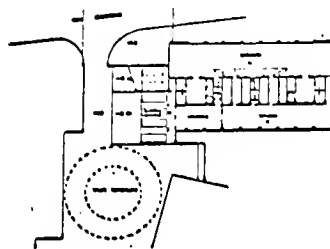
SITE PLAN



MTA CONNECTION



BUILDING SERVICE



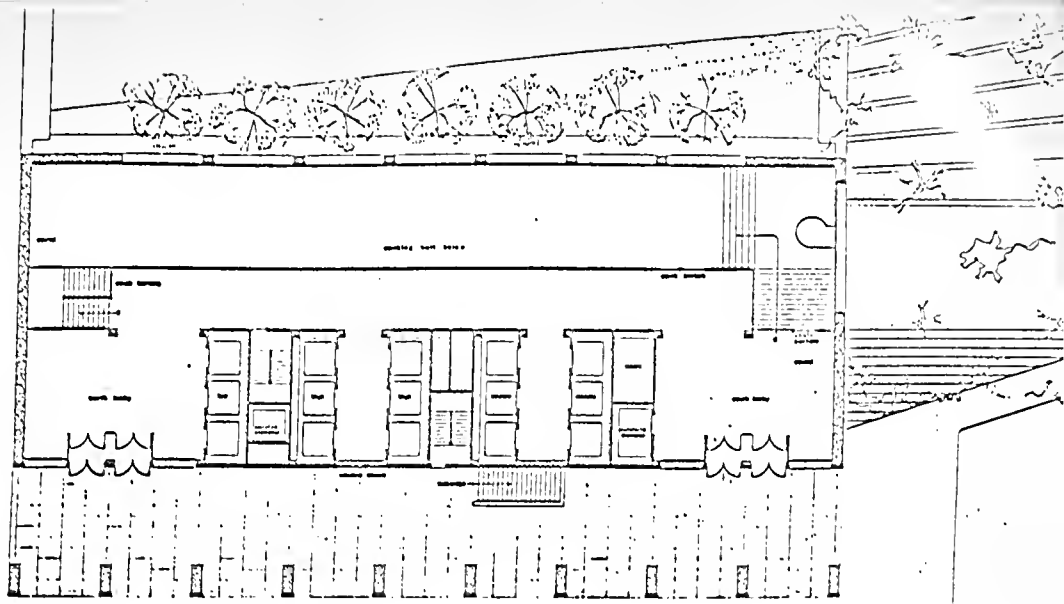
BASEMENTS



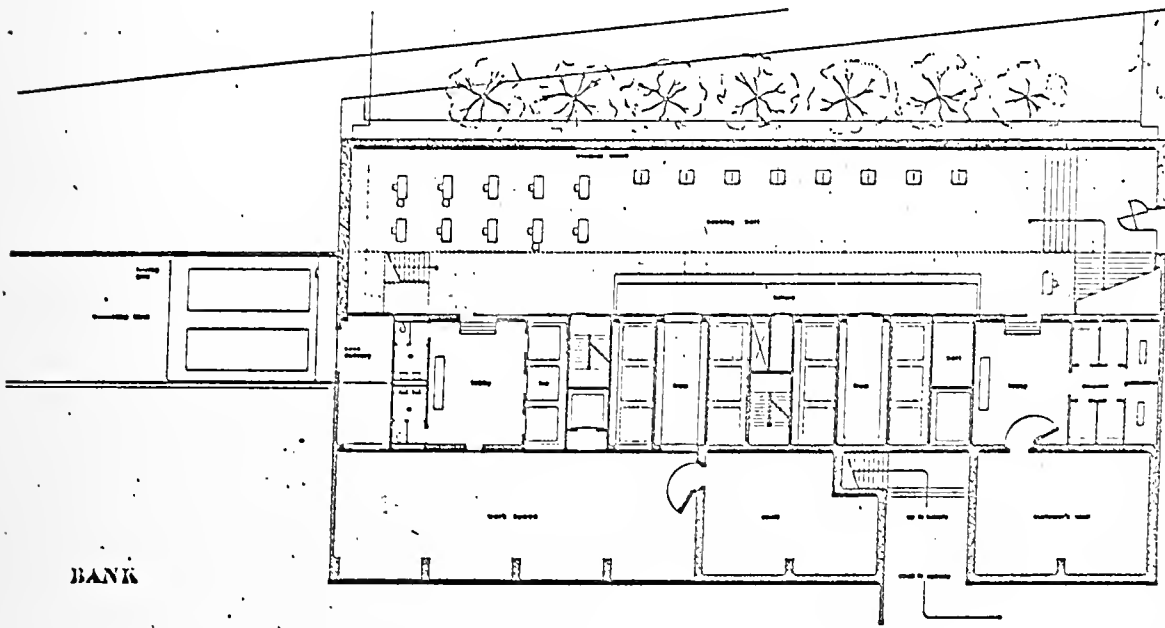
SITE NOTES



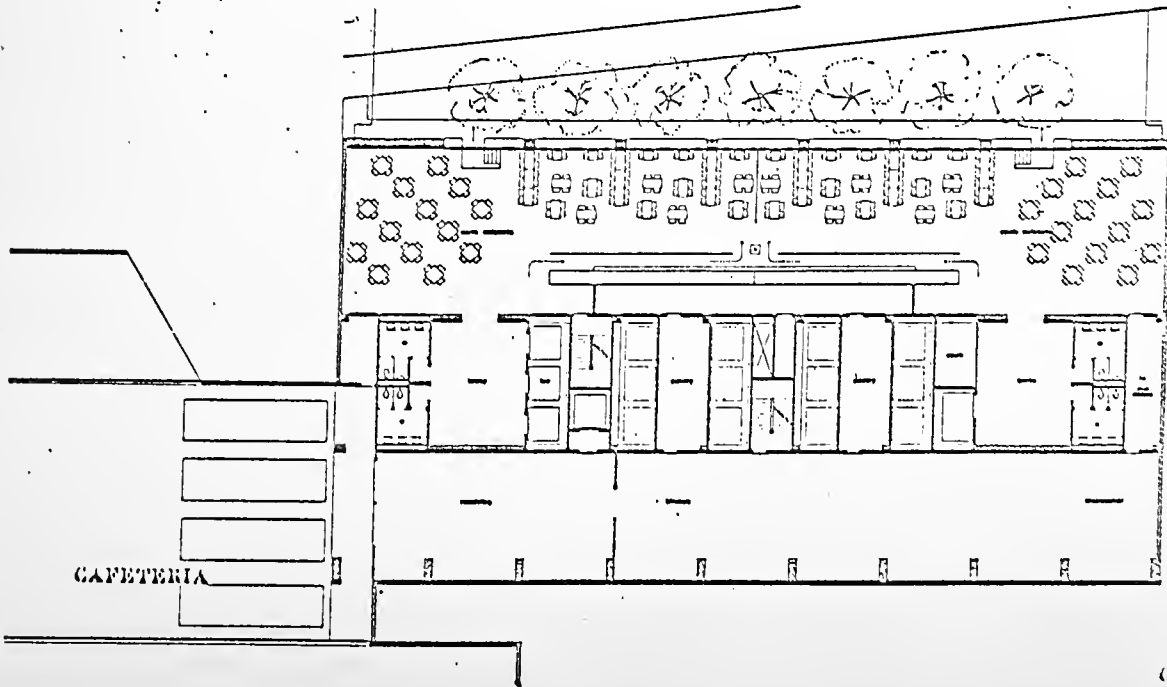
ARCADE



BANK



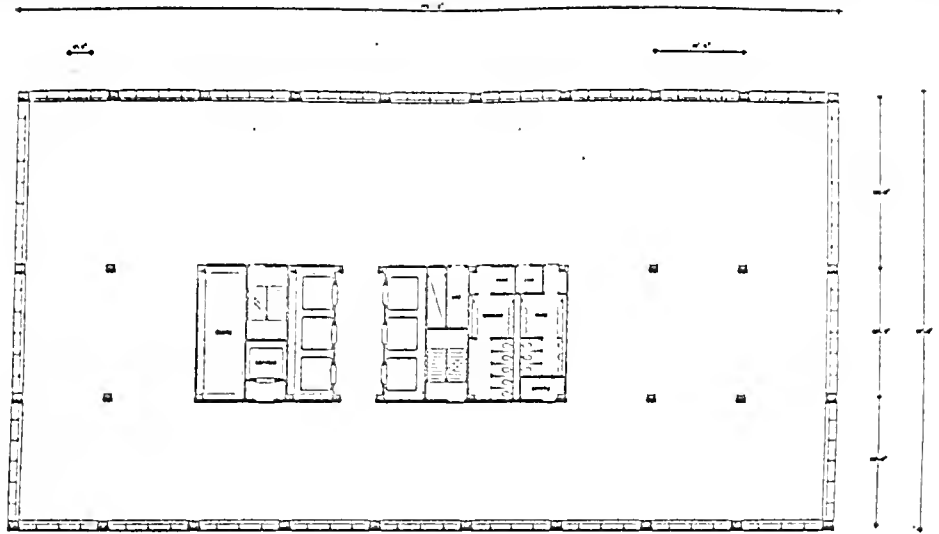
CAFETERIA



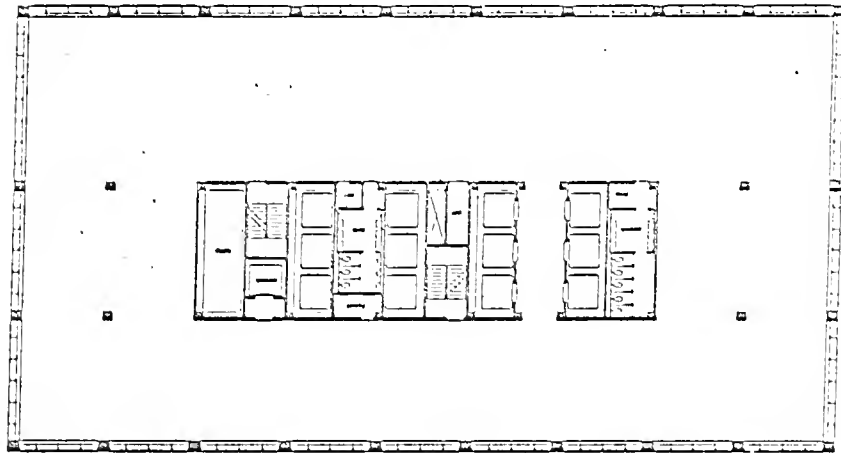
GROUND FLOOR

SN

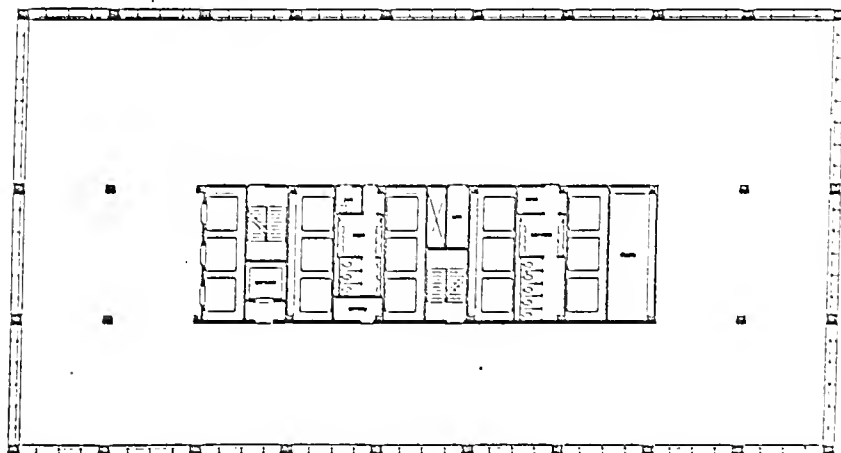
HIGH



MIDDLE

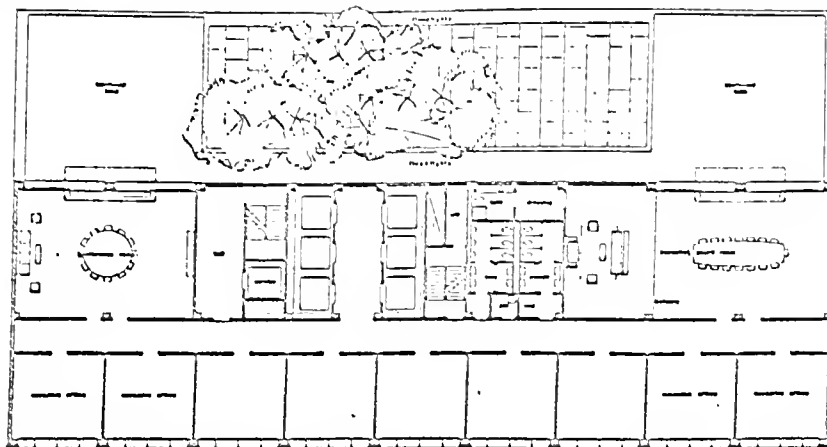


LOW

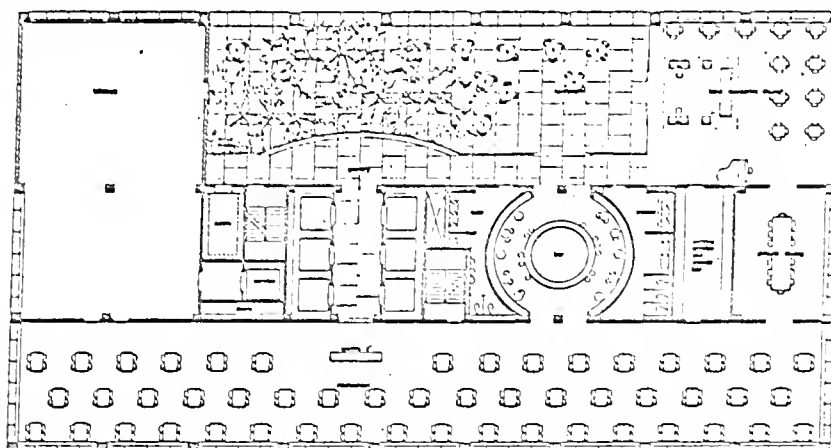


TYPICAL FLO
N

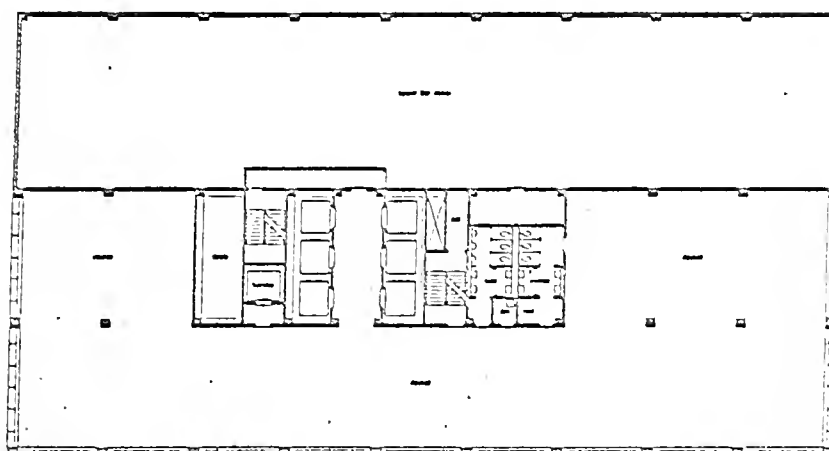
PENTHOUSE

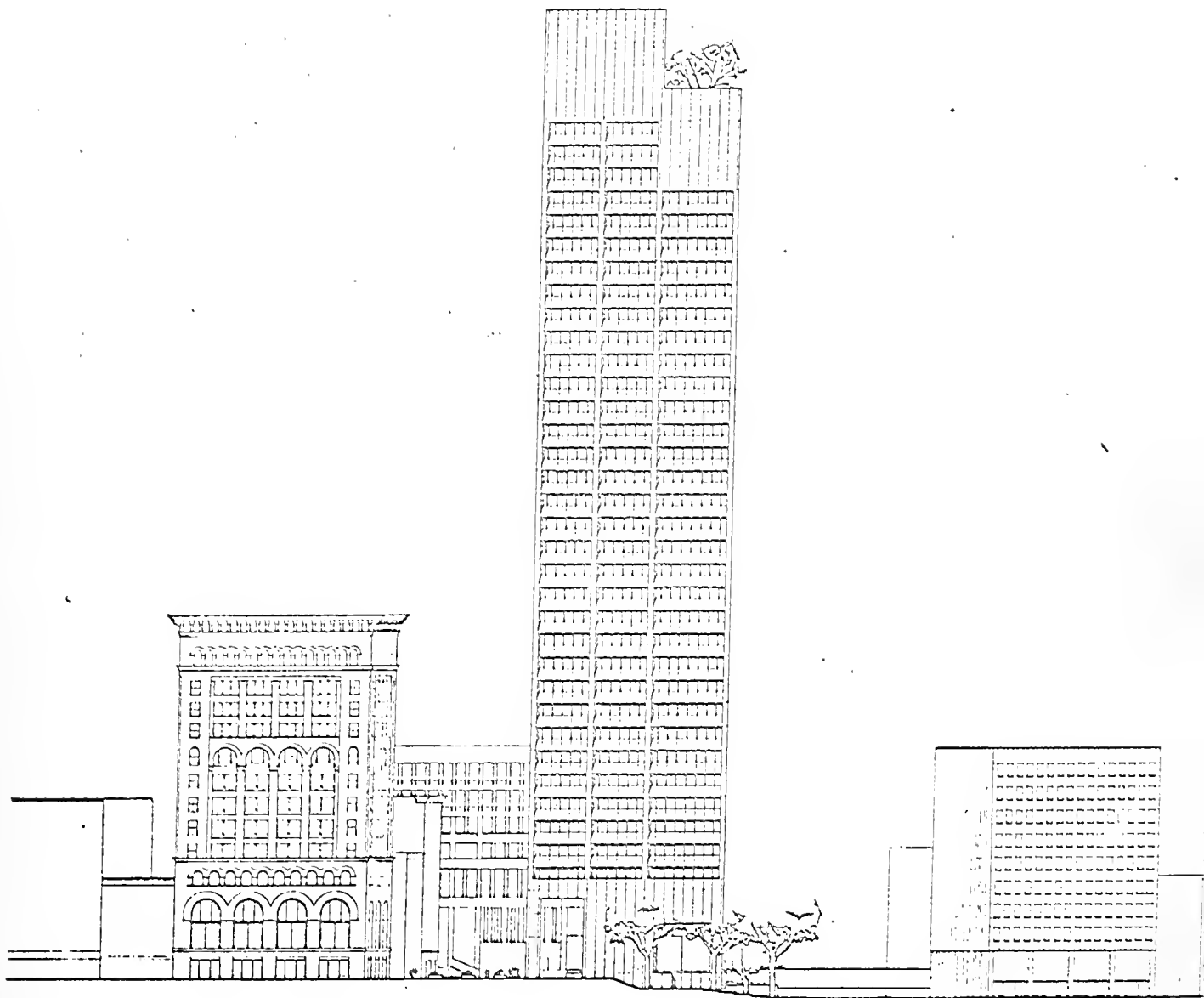


RESTAURANT

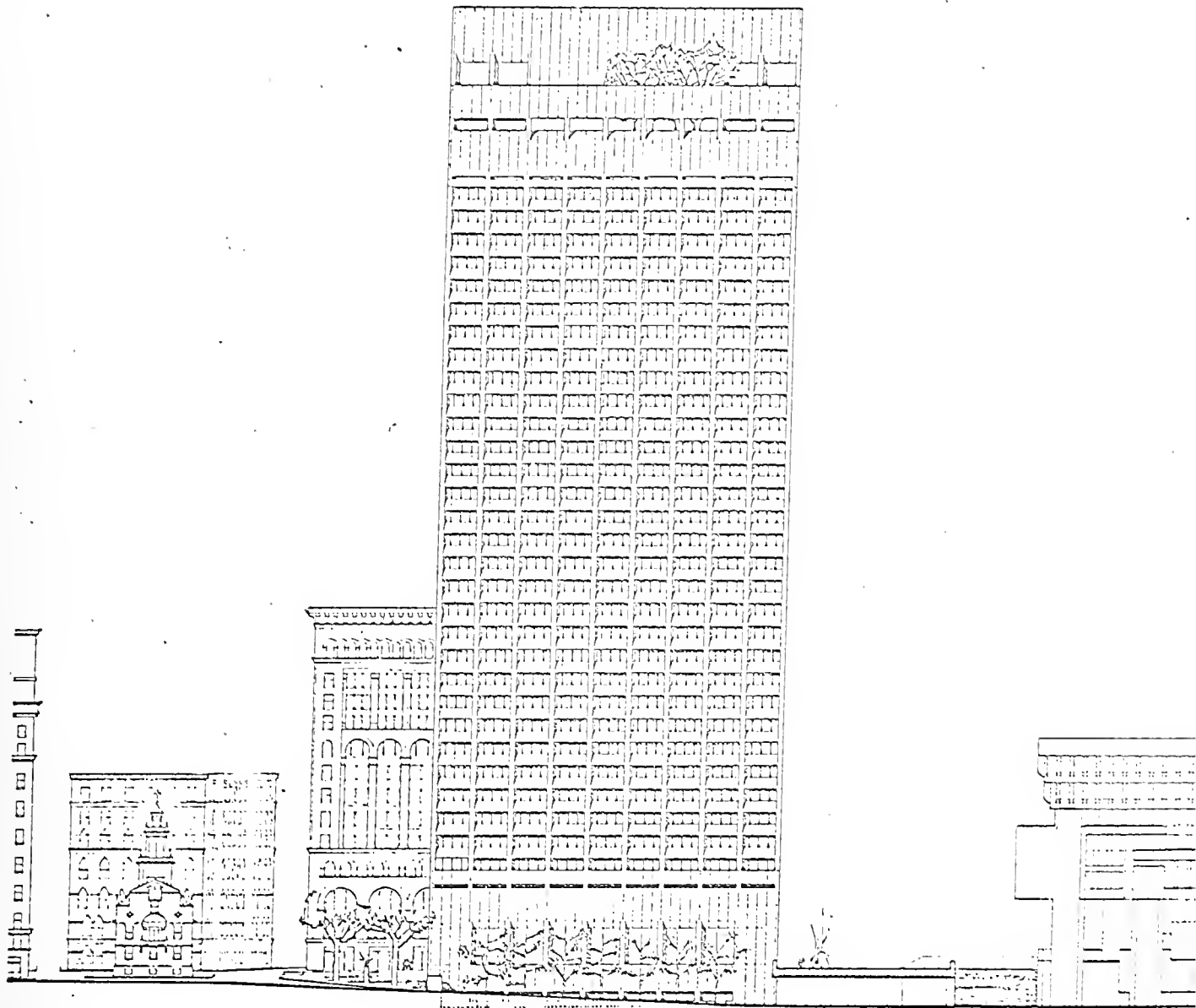


MECHANICAL

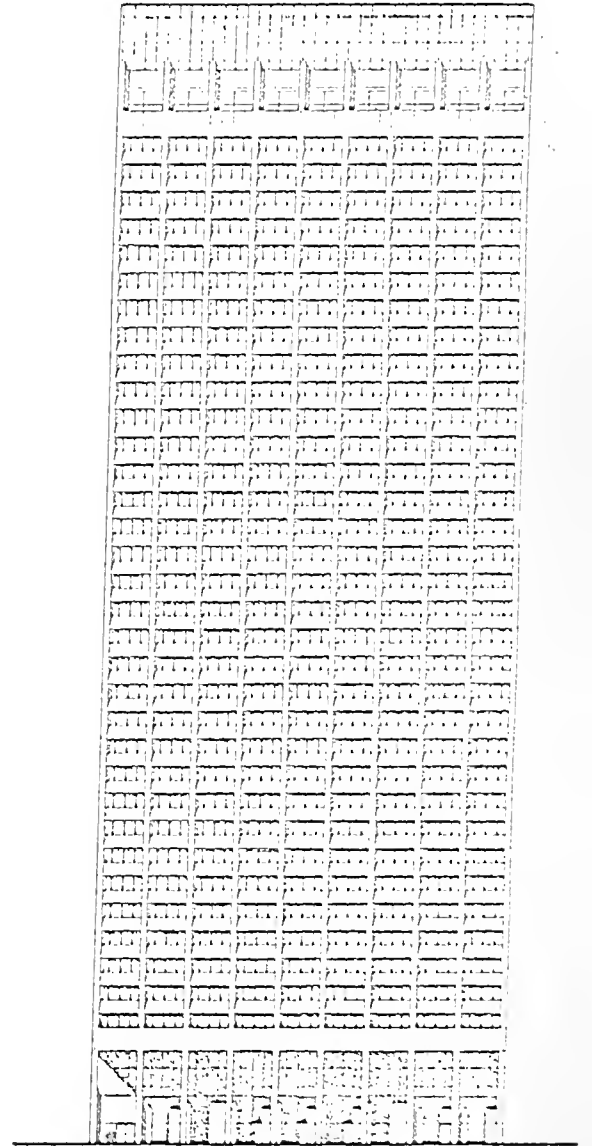
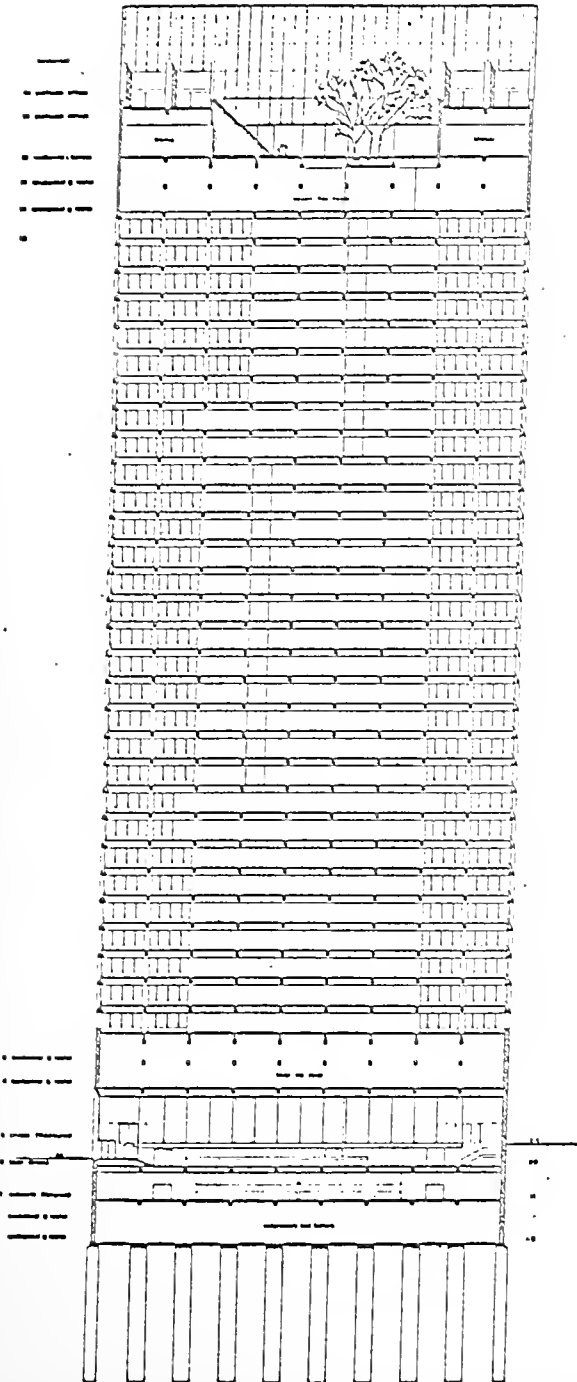




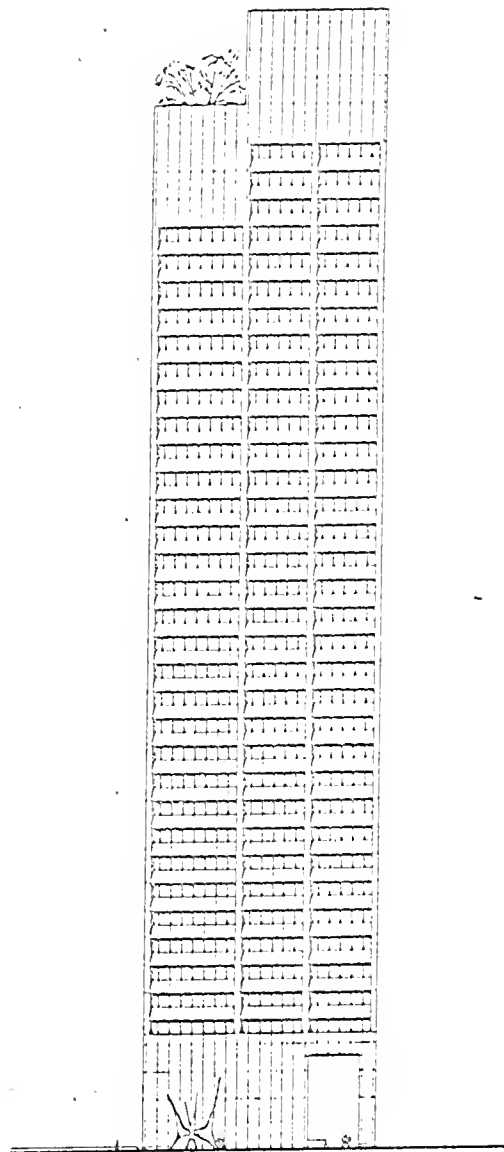
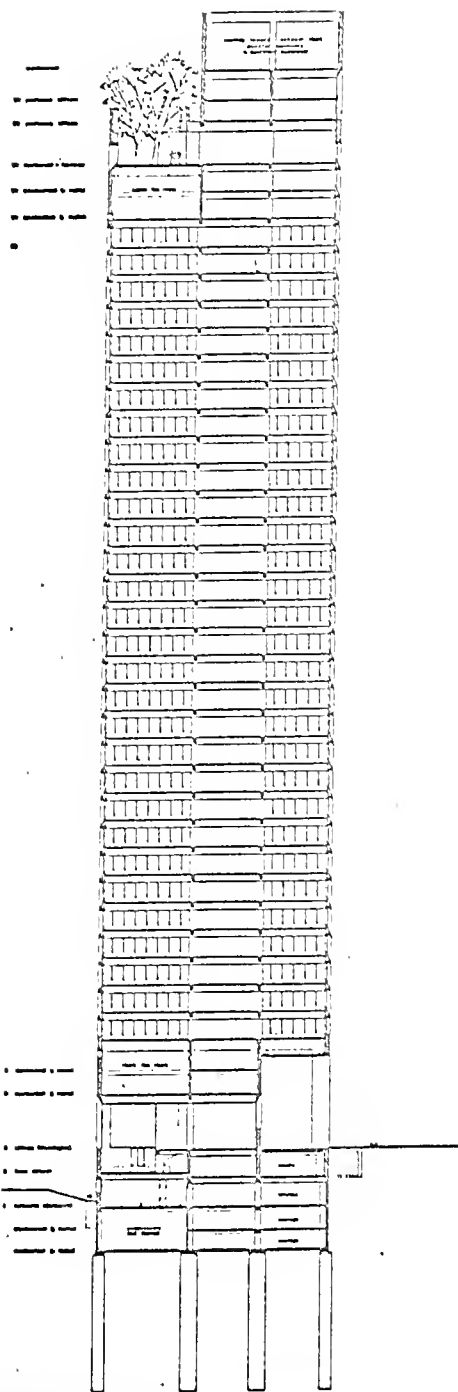
SOUTH



EAST

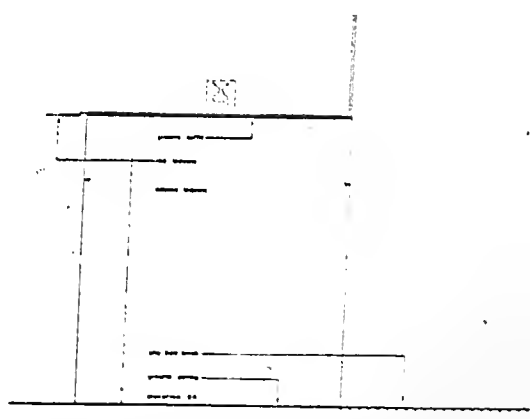
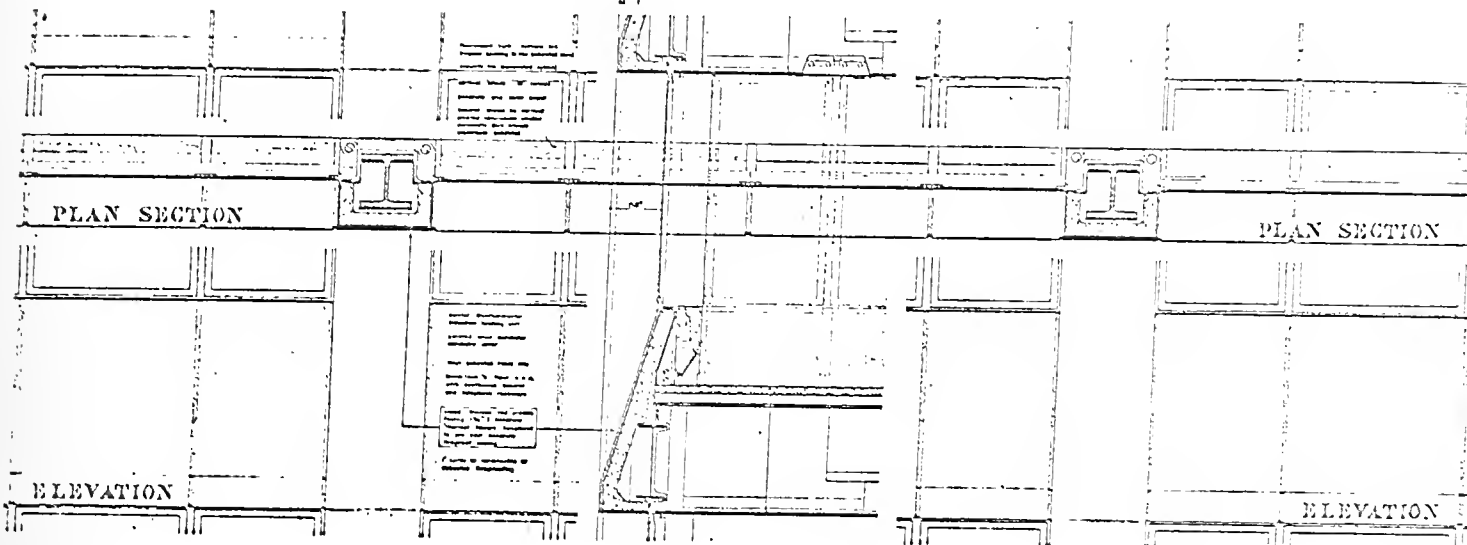
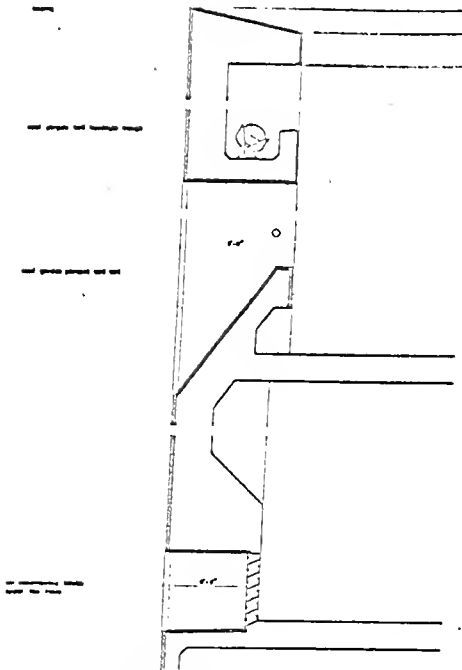
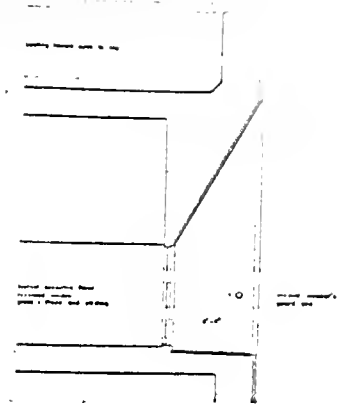


WEST



NORTH

VERTICAL SECTION





OUTLINE SPECIFICATIONS

Structural

Heating, Ventilation and Air Conditioning

Electrical

Plumbing

OUTLINE SPECIFICATIONS - STRUCTURAL

In order to obtain the maximum effective floor space by keeping the structural members as small as possible, in order to expedite construction, and in order to facilitate and minimize the cost of future changes and adjustments to tenant requirements, the basic frame of the building will be of structural steel.

Floor members will be mainly standard rolled shapes. Columns will be kept to a minimum size, using the 14" wide flange column series, and where the loads exceed the capacity of rolled sections, column sizes will be kept small by using plates formed into compact shapes. Such assemblies and all other shop work will be welded.

In the field, connections of beams to columns and connections of bracing also will be welded. Beam to beam connections will be field bolted. The welded field connections will generally be butt welded, thus requiring no plates or angles. This produces simple compact details and reduces the quantity of steel.

In tenant and other open spaces, floor beams will be kept at a maximum distance apart. This, with its attendant economy, is made possible by a cellular steel floor 3" in depth. This cellular floor provides raceways for all electric and communication lines. There will be a 2-1/2" lightweight concrete fill, finished monolithically, over this steel floor.

This system of floor construction, in addition to its economy and flexibility, readily permits local changes and reinforcement for special loading such as computer rooms and store rooms, and for the introduction of intercommunicating stairs, dumbwaiters, shafts, etc. These requirements frequently become known after construction is in progress or even completed.

The underside fireproofing of the steel beams and deck will be a sprayed-on coat of asbestos fibre or vermiculite. The columns will be fireproofed with gypsum or lightweight concrete block.

On special floors such as in mechanical equipment spaces, the floor system will be concrete encased steel beams supporting a 6" or 8" poured stone concrete slab. This construction, in addition to carrying heavier local loads, will provide necessary sound and vibration attenuation. In addition, items of mechanical equipment such as cooling towers and tanks, will be supported by steel beams.

Exterior stone will be supported by lintels attached to the members of the steel frame. The horizontal stiffness required for wind forces will be provided by the beams and columns acting as frames, augmented at the fifth floor and below by vertical diagonal bracing which will be located at the rear of elevator shafts and in the solid exterior wall.

At the base, the steel columns will be supported by compact steel billets. These will bear on stone concrete caps over either piles or caissons, which will extend down to solid ground. The retaining walls enclosing the structure below ground, as well as pits, sumps, trenches, etc., will be of stone concrete. Provision will be made for any water condition encountered.

OUTLINE SPECIFICATIONS - HEATING, VENTILATION AND AIR CONDITIONING

A. AIR CONDITIONING

1. The building will be served by separate systems for the following areas:
 - a) Peripheral areas above the Banking Floor.
 - b) Interior areas above the Banking Floor.
 - c) Banking Floor.
 - d) Cafeterias, Lobby and Cellar Areas.

The areas above the Banking Floor will be served by separate systems, one set of systems serving the lower half of the building, another set serving the upper half. These systems will be located in the upper and lower mechanical equipment rooms, as shown on the drawings. The Banking Floor, Cafeterias, Lobby and Cellar areas will be served by systems located in the lower mechanical equipment room and the sub-basement mechanical equipment room.

2. The peripheral areas consist generally of the fifteen feet of floor space adjacent to the perimeter of the building. These areas will be conditioned by a high velocity, high pressure system supplying air to room air induction units concealed at the windows.

The supply air will serve to induce several times its volume of room air to circulate thru the units and into the space being conditioned. In passing thru the induction unit, the air is cooled or heated by an internal coil. A plenum chamber within the units acts to decrease the pressure and velocity of the supply air and to reduce its noise level to acceptable limits.

The units will also be supplied with chilled water in summer and hot water in winter. The combination of the two media, air and water, will accomplish proper room temperature on a year round basis by varying the water quantities to each bay automatically; the high velocity air will be zoned in accordance with exposures and its temperature will be varied on a schedule corresponding to outdoor temperature.

The supply air quantities for the perimeter units will be proportional to the cooling load based on exposure. Generally, the amounts will be in the range of 0.5 to 0.6 CFM per sq. ft. At least 0.25 CFM per sq. ft. of this quantity will consist of fresh outside air, which will be increased to 100% in the intermediate seasons.

By inducing the recirculation of large quantities of room air, the induction units will assure both adequate ventilation and rapid, draft-free circulation of air for comfort purposes in the perimeter areas.

3. The interior areas will be conditioned by a low pressure air system which will be individually zoned for each floor. Reheat coils will be provided on each floor for zoning purposes.

The air quantities supplied to the interior will be based on approximately 1.0 CFM per sq. ft. to provide proper cooling in the summer based on occupancy and lighting loads. At least 0.25 CFM per sq. ft. of this air will consist of fresh air in summer and winter, with provision for providing up to 100% fresh air in the intermediate seasons.

4. The Banking Floor, Cafeterias, Lobby, and Cellar areas will be served low pressure ducted air systems, which will be provided with reheat coils for suitable temperature control in the individual areas. Provisions will also be made for required fresh air and ventilation.
5. Horizontal duct distribution for the typical floors will terminate in trunk ducts surrounding the core. Duct distribution for specific tenant layouts will be extended from these trunk ducts as required. The steel beam and slab construction of the building lends itself particularly well to these duct distribution systems. The general design of the ducts will be such as to keep their height to a minimum to allow for a maximum height between floors and suspended ceilings. However, once a duct has passed under a beam, additional height is available between the top of the suspended ceiling and the underside of the slab. This greater height can be used for reheat coils, duct crossovers and crossovers between piping and ductwork. This becomes particularly important when special requirements for tenants are eventually developed: Direct returns, smoke exhaust systems, private toilets, special systems for electronic data processing rooms, cooking facilities, etc. If these requirements are known sufficiently early in the construction period, certain unusual conditions can be met by providing holes thru the steel beams or by lessening their depth. Such changes would be far more difficult to accomplish with an all-concrete design.

Special reinforcement of certain portions of the floor may also be required for supplementary air conditioning equipment after the structure is completed. This equipment would be required for data processing areas and for tenants desiring 24-hour operation of parts of their premises. Steel beam and slab construction makes such reinforcement a relatively easy procedure.

B. DESIGN CONDITIONS

Summer Outdoor	-	92 degree F. dry bulb 75 degree F. wet bulb.
Indoor	-	77 degree F. dry bulb and 50% relative humidity
Winter Outdoor	-	Zero Degree F.
Indoor	-	70 degree F.
Occupancy	-	One person per 100 sq. ft.
Lighting & Equipment	-	5.5 watts per sq. ft.

C. EXHAUST VENTILATION

Systems of exhaust ventilation will be provided for all interior toilets, and service areas and unconditioned cellar areas to provide suitable conditions to meet the requirements of the occupancy and to comply with the Boston Building Code.

D. SERVICES AND EQUIPMENT

1. Steam will be obtained from the Boston Edison Company's mains in the street. Steam will be used for heating and for the Air Conditioning Machines.
2. Refrigeration for air conditioning will be provided by two water chilling machines. The machines will be the absorption refrigeration type using steam at approximately 12 p.s.i. Machines will be located in the sub-sub-basement machine room.
3. A multi-celled cooling tower will be provided on the roof of the building for condenser water.

4. Temperature Controls:

a) Induction Units:

A pneumatic control valve will be provided for every two units and a thermostat will be provided for every two valves. Additional valves and thermostats can be provided to suit the requirements of the individual tenants.

b) Primary Air Systems:

These are the systems supplying air to the induction units. A complete control package is provided to regulate the temperature and humidity in this air. The amount of fresh air is automatically proportioned to achieve maximum operating economy, with a fixed minimum. The temperature of the air to each exposure zone is separately scheduled to a corresponding out-door temperature.

c) Interior Systems, Banking Floor, Cafeterias, Lobby and Cellar Areas:

Zone control is provided thermostatically for each reheat coil.

d) Secondary Water:

This is the water supplied to the induction units. From a maximum temperature on the coldest winter days, the water temperature is automatically scheduled to a minimum of 55 degrees F. in summer. An emergency thermostat is provided to limit the water temperature to 55 degrees.

OUTLINE SPECIFICATIONS - ELECTRICAL

A. ELECTRICAL SERVICE

1. The electric service for the project will be supplied by the Boston Edison Company at 277/480 volts from their network transformer vault located on the property.
2. The service will consist of a minimum of two (2) service stabs, rated as required, to serve the building.

B. DISTRIBUTION EQUIPMENT

1. Main Distribution Switchboards - Metal enclosed, dead-front combination fused switches employing quick-make, quick-break mechanisms and current-limiting fuses for feeders and service protectors for mains.
2. Sub-Distribution Switchboards - Metal enclosed, dead-front combination fused switches employing quick-make, quick-break mechanisms and current-limiting fuses.
3. Power Centers - Metal enclosed dry-type Class H three phase 480/208/120 volt transformer section with high and low side sections of combination fused switches employing quick-make, quick-break mechanisms and current limiting fuses.
4. Branch Distribution Equipment
 - a) Lighting Panels - 277/480 volt lighting panels will consist of 20 ampere trip, 100 ampere "E" frame, single pole circuit-breakers. Where short-circuit requirements so dictate, 100 ampere pull-fuse type mains with current-limiting fuses will be provided. Each panel will contain sufficient circuits to supply a minimum of 4 watts per square feet of rentable floor area.
 - b) Receptacle Panels - 120/208 volt receptacle panels will consist of required trip, 50 ampere frame, bolted single pole circuit breakers. Main breakers will be 100 ampere "E" frame, where required. Each panel contains sufficient circuits to supply a minimum of 2 watts per square foot of rentable floor area.

- c) Special Purpose Panels - Will be similar in design to either the lighting or receptacle panels, modified as required to supply special loads such as Kitchen Equipment, Computer Equipment, etc.

C. WIRING SYSTEMS

1. Cellular Floor Wiring System

- a) The structural cellular floor system will be utilized as an under-floor raceway system by the "activation" of the individual cells for telephone and power circuits. Telephone and power outlets can then be located with complete flexibility by drilling out the concrete fill.
- b) Suitably located trench header ducts will provide connections into the cellular floor system from the electric and telephone closets.
- c) The use of the structural floor system for electrical raceways will effect a considerable economy in the electrical installation and will provide ample capacity for the widest variation of individual tenant requirements.

2. Power Wiring

- a) The electrical installation will provide all required feeder, branch, control, signal and relay circuits for:
 - (1) Air conditioning, heating, ventilating and plumbing equipment.
 - (2) Power, control and lighting supply for elevators.
- b) Where special equipment such as computers, etc., are installed, special provisions for supplying this equipment will be made.

3. Wiring Material

- a) All branch circuit wiring will have Type "THW" insulation rated at 600 volts.
- b) All branch circuit wiring will be installed in galvanized or sheradized steel conduit except that electric metallic tubing will be permitted in the hung ceilings.

- c) All exposed panel and equipment feeders will be installed in steel or aluminum conduits. Bus duct may be used where required.

D. LIGHTING

- 1. Typical Office Floor - The building standard lighting unit will be a recessed fluorescent unit, 2' x 4', containing 4-40 watt rapid start lamps, and furnished with a frameless acrylic diffuser.
- 2. Public Spaces - Special lighting treatment will be provided to suit the mood of the various areas.

E. PUBLIC TELEPHONE SYSTEM

- 1. Empty conduits, sized in accordance with the requirements of the New England Telephone & Telegraph Company, will be extended from man-holes in the street to a telephone frame room in the building.
- 2. Sleeves will be provided in the telephone closets for vertical distribution.

F. FIRE SIGNAL SYSTEMS

- 1. Fire Alarm - Coded Type Consisting Of:
 - a) A coded manual station on each floor at exit stairway.
 - b) A coded automatic station in each mechanical and electrical equipment room and large storage room, activated by automatic detectors.
 - c) Single stroke gongs in elevator shafts, spaced for audibility throughout the towers.
 - d) Annunciator Panel with signal lights and Punch Register located at a central fire control station.
- 2. Fire Signal: Manual Type Consisting Of:
 - a) Strap Key Stations, located adjacent to main standpipe on each floor, to sound alarm gongs throughout the building.

3. Fire Communications: Wired Type Consisting Of:

- a) Intercom telephone, located adjacent to main standpipe on each floor.
 - b) Master station at central fire control station.
 - c) Sub-master station in fire pump room.
4. The above systems will be connected for integrated operation with smoke and sprinkler alarm systems and will conform to the requirements of local, municipal and state laws.

G. MISCELLANEOUS SYSTEMS

- 1. Stairway and Exit light system arranged for future connection to any emergency power source.
- 2. Ground system in compliance with local and national codes.
- 3. Lightning protection system.
- 4. Aircraft warning light system.
- 5. TV Antenna System - empty conduit.
- 6. Building service intercommunications system.

OUTLINE SPECIFICATIONS - PLUMBING

A. SANITARY AND STORM DRAINAGE SYSTEM

1. A complete system of sanitary and storm drainage will be provided for all fixtures, equipment, roofs and areas, etc.
2. The sanitary and storm drainage systems will run independent of each other up to the point at which they leave the building. At this point (which will be the inside face of the outside building wall) the storm house drains will connect to the sanitary house drains. The combined house sewers will then leave the building and connect to the existing sewers in the street.
3. A complete system of sanitary and sub-soil drainage will be provided for all fixtures, equipment, etc., located below the gravity sewer level. The systems will extend to sump pumps and/or sewage ejectors. The sump pumps and/or sewage ejectors will discharge to the gravity drainage system.

B. DOMESTIC WATER SYSTEMS

1. A complete system of cold, hot and hot water circulation piping will be provided for all fixtures and equipment requiring the same.
2. The domestic water service will connect to the existing main in the street. Upon entering the building the domestic water service will be metered as required. With the approval of the Local Water Company a secondary domestic water supply will enter the building and will connect to the primary water service ahead of all branch supplies to fixtures or equipment. The primary and secondary domestic water services will connect to existing street mains in different streets where possible.
3. All fixtures and equipment shall be supplied from roof tanks.
4. The roof tanks will be constructed of wood with structural braces and supports. Tanks will be provided with all necessary floats and controls.
5. The roof tanks shall be supplied by duplex, horizontal, split case, bronze mounted house pumps wired for automatic, alternating operation. House pumps will be located in the Sub-basement.

6. The domestic cold water distribution system will be divided into two zones, high and low zones. The low zone will be an up feed system emanating from the fifth floor mechanical equipment room. The high zone will be a down feed system emanating from the thirty seventh floor mechanical equipment room. All floors below the fifth floor will be supplied by street pressure if the street pressure is adequate. If street pressure is not adequate these floors will be supplied off of the low zone system. The water pressure for the up and down feed systems shall be regulated by pressure reducing valve stations.
7. The domestic hot water will be generated by duplex steam generated domestic hot water heaters. The heaters will be fully automatic with all necessary and required controls and safety devices. The domestic hot water heater will be vertical shell and coil type.
8. The domestic hot and hot water circulating distribution system will be divided as described in sub-paragraph 6 above. System water pressure will be regulated by the same pressure reducing valve stations that regulate the domestic cold water distribution system. The domestic hot water heaters for the low zone will be located in the fifth floor mechanical equipment room and the hot water heaters for the high zone will be located in the thirty seventh floor mechanical equipment room.
9. Domestic hot water circulating pumps will be all bronze inline type.

C. GAS SYSTEM

1. A complete system of gas piping will be provided for all equipment requiring same.
2. The gas service will connect to the existing main in the street. Upon entering the building the gas service will be metered as required. Provide all vents, regulators etc., as required.

D. FIRE STANDPIPE & SPRINKLER SYSTEMS

1. A complete approved fire standpipe and sprinkler system will be provided.
2. The fire service shall connect to the existing main in the street. Upon entering the building the fire service will be metered as required. With the approval of the local water company, local fire department and all other authorities having jurisdiction, a secondary fire service will enter the building and will connect to the primary fire service ahead of the fire pump. The primary and secondary fire services will connect to existing mains in different streets where possible.

3. All required siamese connections, valves automatic ball drips, cross connections, pressure reducing valves, roof manifolds, hose cabinets and racks fire extinguishers etc., will be provided. Also provided a valved connection off of the fire service for the sprinkler system.
4. The fire standpipe system will be supplied from a fire pump. The fire pump and control panel for same will be as approved for fire use.
5. A complete wet pipe sprinkler protection system shall be provided in all required areas.

E. PLUMBING FIXTURES

1. All water closet, urinal and lavatories will be vitreous china wall hung.
2. Service sinks will be precast terrazzo receptors with combination fork braced faucet mounted on wall.
3. Electric water coolers will be stainless steel, fully recessed and equipped with individual cooling units.
4. Equipment and fixtures which require plumbing connections will be connected to the plumbing systems and all necessary controls, valves, faucets, stops, traps, hangers, mounting rings, vacuum breakers, piping, etc., will be provided.

